

California Regional Water Quality Control Board
Santa Ana Region

RESOLUTION NO. 99-10

A Resolution Amending the Water Quality Control Plan
for the Santa Ana River Basin
to Establish a Total Maximum Daily Load for Fecal Coliform Bacteria
in Newport Bay

WHEREAS, the California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. An updated Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) was adopted by the Regional Board on March 11, 1994, approved by the State Water Resources Control Board (SWRCB) on July 21, 1994 and approved by the Office of Administrative Law on January 24, 1995.
2. Water contact recreation (REC1) and shellfish harvesting (SHEL) are among the beneficial use designations specified in the Basin Plan for Newport Bay.
3. The Basin Plan includes numeric water quality objectives for fecal coliform bacteria in Newport Bay. For the protection of the water contact recreation beneficial use, these objectives specify that Newport Bay shall not contain fecal coliform in excess of a 5 sample/month log mean of 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period. To protect the shellfish harvesting beneficial use, the Basin Plan also requires that Newport Bay have a median fecal coliform density of less than 14 MPN (most probable number)/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
4. These objectives for fecal coliform are not being consistently met in Newport Bay. Discharges of fecal coliform waste adversely impact beneficial uses by causing the Orange County Health Care Agency to close beach areas to body contact recreation, and/or to post notices to avoid body contact recreation. Shellfish harvesting is also banned in Upper Newport Bay. In part in response to these problems, the Regional Board listed Newport Bay as water quality limited in accordance with Section 303(d) of the Clean Water Act. Section 303(d) of the Clean Water Act requires the establishment of the Total Maximum Daily Load (TMDL) of fecal coliform that can be discharged while still ensuring compliance with water quality standards. Section 303(d) also requires the allocation of this TMDL among sources of fecal coliform, together with an

implementation plan and schedule that will ensure that the TMDL is met and that compliance with water quality standards is achieved.

5. The Regional Board discussed this matter at public workshops held on December 11, 1998 and January 15, 1999, after notice was given to all interested persons in accordance with Section 13244 of the California Water Code. Based on that discussion and the testimony received, the Board directed staff to prepare the appropriate Basin Plan amendment and related documentation to establish a TMDL for fecal coliform in Newport Bay. The Board considered the proposed Basin Plan amendment during a public hearing held on March 5, 1999, and continued the public hearing until April 9, 1999.
6. The TMDL-related Basin Plan amendment attached to this resolution meets the requirements of Section 303(d) of the Clean Water Act. The amendment requires the implementation of Best Management Practices (BMPs) to control bacterial inputs to provide a reasonable assurance that water quality standards will be met.
7. The Regional Board prepared and distributed written reports (staff reports) regarding adoption of the Basin Plan amendment in compliance with applicable state and federal environmental regulations (California Code of Regulations, Section 3775, Title 23, and 40 CFR Parts 25 and 131).
8. The process of basin planning has been certified by the Secretary for Resources as exempt from the requirements of the California Environmental Quality Act (Title 14, Section 15251g of the California Code of Regulations) to prepare an Environmental Impact Report or Negative Declaration. The Basin Plan amendment package includes an Environmental Checklist, an assessment of the environmental impacts of the Basin Plan amendment, and a discussion of alternatives. The amended Basin Plan, Environmental Checklist, staff reports, and supporting documentation are functionally equivalent to an Environmental Impact Report or Negative Declaration.
9. The Regional Board has considered federal and state antidegradation policies and other relevant water quality control policies and finds the Basin Plan amendment consistent with those policies.
10. On April 9, 1999, the Regional Board held a Public Hearing to consider the Basin Plan amendment. Notice of the Public Hearing was given to all interested persons and published in accordance with Water Code Section 13244.

11. The Basin Plan amendment must be submitted for review and approval by the SWRCB, the Office of Administrative Law (OAL), and the U.S. Environmental Protection Agency. Once approved by the SWRCB, the amendment is submitted to OAL. A Notice of Decision will be filed after the SWRCB and OAL have acted on this matter. The SWRCB will forward the approved amendment to the U.S. Environmental Protection Agency for review and approval.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Regional Board adopts the amendment to the Water Quality Control Plan for the Santa Ana River Basin (Region 8) as set forth in the attachment.
2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the SWRCB in accordance with the requirement of Section 13245 of the California Water Code.
3. The Regional Board requests that the SWRCB approve the Basin Plan amendment in accordance with Sections 13245 and 13246 of the California Water Code and forward it to the Office of Administrative Law for approval.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Santa Ana Region, on April 9, 1999.

Gerard J. Thibeault
Executive Officer

Attachment to Resolution No. 99-10

Amendment to the Santa Ana Region Basin Plan

Chapter 5 - Implementation Plan, Discussion of Newport Bay Watershed (page 5-39 et seq.)

(Language deleted is struck out; language added is underlined)

3. Bacterial Contamination

Bacterial contamination of the waters of Newport Bay can directly affect two designated beneficial uses: water-contact recreation (**REC-1**) and shellfish harvesting (**SHEL**). The Orange County Health Care Agency (OCHCA) conducts routine bacteriological monitoring and more detailed sanitary surveys as necessary, and is responsible for closure of areas to recreational and shellfish harvesting uses if warranted by the results.

Because of consistently high levels of total coliform bacteria, the upper portion of Upper Newport Bay (Upper Bay) has been closed to these uses since 1974. In 1978, the shellfish harvesting prohibition area was expanded to include all of the Upper Bay, and the OCHCA generally advises against the consumption of shellfish harvested anywhere in the Bay. Bacterial objectives established to protect shellfish harvesting activities are rarely met in the Bay. (Fecal coliform objectives for the protection of shellfish harvesting and water-contact recreation are shown in Chapter 4, "Enclosed Bays and Estuaries". The OCHCA has relied on total coliform standards specified in the California Health and Safety Code. Fecal coliform are a subset of total coliform.) A number of storm channels empty into the Upper Bay and appear to be the principal sources of the high bacterial (coliform) concentrations. Statistical evaluation of the long-term data shows a significant reduction in bacterial concentrations in the Upper Bay in recent years. This reduction may be associated, at least in part, with the excavation of the in-bay basins, which have significantly increased tidal flushing. Certain areas in the lower parts of the Upper Bay and in Lower Newport Bay (Lower Bay) are also closed to water-contact recreation on a temporary basis, generally in response to storms. In these areas, there is generally good compliance with water-contact recreation bacterial objectives in the summer.

~~Certain areas in the Lower Bay also show frequent high bacterial concentrations, particularly those locations which are subject to urban runoff and have limited tidal flushing. As in the Upper Bay, more violations of bacterial standards generally occur during storm runoff periods than during dry weather. However, an additional and more significant source of bacterial input contributes to these violations on occasion. This source is the discharge of vessel sanitary wastes.~~

Data collected by the OCHCA demonstrate that tributary inflows, composed of urban and agricultural runoff, including stormwater, are the principal sources of coliform input to the Bay. As expected, there are more violations of bacterial standards in the Bay during wet weather, when tributary flows are higher, than in dry weather. There are few data on the exact sources of the coliform in this runoff. Coliform has diverse origins, including: manure fertilizers which may be applied to agricultural crops and to commercial and residential landscaping; the fecal wastes of humans, household pets and wildlife; and other sources. Special investigations by OCHCA have demonstrated that food wastes are a significant source of coliform. Many restaurants wash down equipment and floor mats into storm drains tributary to the Bay and may improperly dispose of food waste such that it eventually washes into the Bay. Such discharges likely contribute to the chronic bacterial quality problems in certain parts of the Bay.

Another source of bacterial input to the Bay is the discharge of vessel sanitary wastes. Newport Bay has been designated a no-discharge harbor for vessel sanitary wastes since 1976. Despite this prohibition, discharges of these wastes have continued to occur. Since these wastes are of human origin, they pose a potentially significant public health threat.

The Regional Board, the City of Newport Beach (City), the County of Orange, the City of Newport Beach Harbor Quality Committee, and other parties have taken or stimulated actions to enforce the vessel waste discharge prohibition. The principal focus of these efforts has been to make compliance with the prohibition convenient and therefore more likely. Vessel waste pumpouts have been installed at key locations around the Bay and are inspected routinely by the OCHCA. A City ordinance addresses people-intensive boating activities to ensure proper disposal of that sanitary wastes are appropriately disposed. The ordinance requires that sailing clubs, harbor tour, and boat charter operations install pumpouts for their vessels. Another City ordinance addresses vessel waste disposal by persons living on their boats. Efforts have also been made to ensure that there are adequate public rest rooms onshore. The City also sponsors an extensive public education campaign designed to advise both residents and visitors of the discharge prohibition, the significance of violations, and of the location of pumpouts and rest room facilities. The effectiveness of these extensive vessel waste control efforts is not known.

As noted, the fecal waste of wildlife, including waterfowl that inhabit the Bay and its environs, is a source of coliform input. The fecal coliform from these natural sources may contribute to the violations of water quality objectives and the loss of beneficial uses, but it is currently unknown to what extent these natural sources contribute to, or cause, the violations of bacterial quality objectives in Newport Bay.

Reports prepared by Regional Board staff describe the bacterial quality problems in the Bay in greater detail and discuss the technical basis for the fecal coliform TMDL that follows (21, 22). Implementation of this TMDL is expected to address these

bacterial quality problems and to assure attainment of water quality standards, that is, compliance with water quality objectives and protection of beneficial uses.

3.a. Fecal Coliform TMDL

A prioritized, phased approach to the control of bacterial quality in the Bay is specified in this TMDL. This approach is appropriate, given the complexity of the problem, the paucity of relevant data on bacterial sources and fate, the expected difficulties in identifying and implementing appropriate control measures, and uncertainty regarding the nature and attainability of the SHEL use in the Bay. The phased approach is intended to allow for additional monitoring and assessment to address areas of uncertainty and for future revision and refinement of the TMDL as warranted by these studies.

Table 5-9f summarizes the TMDL, Waste Load Allocations (WLAs) for point sources of fecal coliform inputs and Load Allocations (LAs) for nonpoint source inputs. As shown, the TMDL, WLAs and LAs are established to assure compliance with water contact recreation standards no later than (14 years after State approval of the TMDL)* and with shellfish standards no later than (20 years after State approval of the TMDL)*. WLAs are specified for vessel waste and urban runoff, including stormwater, the quality of which is regulated under a County-wide NPDES permit issued by the Regional Board. This runoff is thus regulated as a point source, even though it is diffuse in origin. LAs are specified for fecal coliform inputs from agricultural runoff, including stormwater, and natural sources. The TMDL is to be adjusted, as appropriate, based upon completion of the studies contained in Table 5-9g. Upon completion of these studies, an updated TMDL report will be prepared summarizing the results of the studies and making recommendations regarding implementation of the TMDL. The results of the studies may lead to recommendations for changes to the TMDL specified in Table 5-9f to assure compliance with existing Basin Plan standards (objectives and beneficial uses). The study results may also lead to recommendations for changes to the Basin Plan objectives and/or beneficial uses. If such standards changes are approved through the Basin Plan amendment process, then appropriate changes to the TMDL would be required to assure attainment of the revised standards. Revision of the TMDL, if appropriate, would also be considered through the Basin Plan amendment process.

Upon completion and consideration of the studies and any appropriate Basin Plan amendments, a plan for compliance with the TMDL specified in Table 5-9f, or with an approved amended TMDL, will be established. It is expected that this plan will

* Note: Upon State approval (i.e., approval by the Regional Board, the State Water Resources Control Board, and the Office of Administrative Law), this parenthetical "formula" will be replaced by the date certain, based on the date of approval.

specify a phased compliance approach, based on consideration of such factors as geographic location, the priority assigned by the Regional Board to specific locations for control actions (see Section 3.a.ii, "Beneficial Use Assessment"), season, etc. Interim WLAs, LAs and compliance dates that lead to ultimate compliance with the TMDL will be established.

The TMDL and its allocations contain a significant margin of safety. The margin of safety can be either incorporated implicitly through analytical approaches and assumptions used to develop the TMDL or added explicitly as a separate component of the TMDL. A substantial margin of safety is implicitly incorporated in the TMDL in the fact that the TMDL does not apply criteria for dilution, natural die-off, and tidal flushing. The TMDL, WLAs, and LAs are established at concentrations equivalent to the water quality objectives.

Table 5-9f: Total Maximum Daily Load, Waste Load Allocations, and Load Allocations for Fecal Coliform in Newport Bay

Total Maximum Daily Load for Fecal Coliform In Newport Bay	Waste Load Allocations for Fecal Coliform in Urban Runoff, including stormwater, Discharges to Newport Bay	Load Allocations for Fecal Coliform in Agricultural Runoff, including stormwater, Discharges to Newport Bay	Load Allocations for Fecal Coliform from Natural Sources in all Discharges to Newport Bay	Waste Load Allocations for Vessel Waste
As soon as possible but no later than (14 years after State TMDL Approval)*			In Effect	In Effect
<u>5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30-day period.</u>	<u>5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30-day period.</u>	<u>5-Sample/30-days Geometric Mean less than 200 organisms/ 100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30-day period.</u>	<u>5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30-day period.</u>	<u>0 MPN/100 mL No discharge.</u>
As soon as possible but no later than (20 years after State TMDL Approval)*				In Effect
<u>Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.</u>	<u>Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.</u>	<u>Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.</u>	<u>Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.</u>	<u>0 MPN/100 mL No discharge.</u>

* Note: Upon State approval (i.e., approval by the Regional Board, the State Water Resources Control Board, and the Office of Administrative Law), this parenthetical "formula" will be replaced by the date certain, based on the date of approval.

Table 5-9g: Fecal Coliform Implementation Plan/Schedule Report Due Dates

Task	Description	Compliance Date-As soon As Possible but No Later Than
Task 1	<u>Routine Monitoring Program (Section 3.a.ii.a)</u> <u>a) Submit Proposed Routine Monitoring Plan(s)¹</u> <u>b) Implement Routine Monitoring Plan(s)</u> <u>c) Submit Monthly and Annual Reports (Reporting Period: April 1-March 31)</u>	<u>a) (Within 30 days)²</u> <u>b) Upon Regional Board Approval of Plan(s)</u> <u>c) Monthly within 30 days, Annual Report by September 1</u>
Task 2	<u>Water Quality Model for Bacterial Indicators (Section 3.a.ii.b)</u> <u>a) Submit Proposed Model Development Plan</u> <u>b) Submit Calibrated Model and Model Documentation</u>	<u>a) (Within 30 days)²</u> <u>b) 13 months after Regional Board approval of plan(s)</u>
Task 3	<u>Beneficial Use Assessment Plan (Section 3.a.ii.c)</u> <u>Submit Proposed Assessment Plan for:</u> <u>a) REC-1</u> <u>b) SHEL</u>	<u>a) (Within 30 days)²</u> <u>b) (Within 13 months)²</u>
Task 4	<u>Beneficial Use Assessment Report (3.a.ii.c)</u> <u>Submit Beneficial Use Assessment Report for:</u> <u>a) REC-1</u> <u>b) SHEL</u>	<u>a) 13 months after Regional Board approval of plan(s)</u> <u>b) 13 months after Regional Board approval of plan(s)</u>
Task 5	<u>Source Identification and Characterization Plan(s) (Section 3.a.ii.d)</u> <u>Submit Proposed Source Identification Plans for:</u> <u>a) The Dunes Resort</u> <u>b) Urban Runoff (including stormwater)</u> <u>c) Agriculture (including stormwater)</u> <u>d) Natural Sources</u>	<u>a) (Within 60 days)²</u> <u>b) (Within 60 days)²</u> <u>c) (Within 3 months)²</u> <u>d) (Within 3 months)²</u>

Table 5-9g: Fecal Coliform Implementation Plan/Schedule Report Due Dates		
Task	Description	Compliance Date-As Soon As Possible but No Later Than
<u>Task 6</u>	<u>Source Identification and Characterization Reports (Section 3.a.ii.d)</u> <u>Submit Source Identification and Characterization Reports for:</u> a) <u>The Dunes Resort</u> b) <u>Urban Runoff (including stormwater)</u> c) <u>Agriculture (including stormwater)</u> d) <u>Natural Sources</u>	a) <u>7 months after Regional Board approval of plan(s)</u> b) <u>13 months after Regional Board approval of plan(s)</u> c) <u>16 months after Regional Board approval of plan(s)</u> d) <u>16 months after Regional Board approval of plan(s)</u>
<u>Task 7</u>	<u>Evaluation of Vessel Waste Program (Section 3.a.ii.e)</u> a) <u>Submit Proposed Plan for Evaluating the Current Vessel Waste Program</u> b) <u>Submit Report on the Evaluation of the Vessel Waste Program</u>	a) <u>(Within 3 months)²</u> b) <u>12 months after Regional Board approval of plan</u>
<u>Task 8</u>	<u>TMDL, WLA, and LA Evaluation and Source Monitoring Program (Section 3.a.ii.f)</u> a) <u>Submit Proposed Evaluation and Source Monitoring Program Plan(s)</u> b) <u>Implement Evaluation and Source Monitoring Plan(s)</u> c) <u>Submit Monthly and Annual Reports (Reporting Period: April 1-March 31)</u>	a) <u>3 months after completion of Tasks 2, 4a, and 6</u> b) <u>Upon Regional Board approval of plan(s)</u> c) <u>Monthly within 30 days, Annual Report by September 1</u>
<u>Task 9</u>	<u>Updated TMDL Report</u> <u>Submit updated TMDL report for:</u> a) <u>REC-1</u> b) <u>SHEL</u>	a) <u>6 months after completion of Tasks 2, 4a, 6, and 7</u> b) <u>6 months after completion of Tasks 2, 4b, 6, and 7</u>

Table 5-9g: Fecal Coliform Implementation Plan/Schedule Report Due Dates		
Task	Description	Compliance Date-As Soon As Possible but No Later Than
Task 10	Adjust TMDL, if necessary: adopt interim WLAs, LAs, and Compliance Dates (Section 3.a.ii.h) a) REC-1 b) SHEL	a) 12 months after completion of Updated TMDL Report for REC-1 (Task 9.a) b) 12 months after completion of Updated TMDL Report for SHEL (Task 9.b)
¹ Note: Provided that the monitoring program plan(s) fulfills the minimum requirements specified in this TMDL, approval of the TMDL shall constitute Regional Board approval of the monitoring program plan(s).		
² Note: Within specified time periods of State TMDL approval (i.e., approval by the Regional Board, the State Water Resources Control Board, and the Office of Administrative Law). Upon State TMDL approval, this parenthetical "formula" will be replaced by the date certain, based upon the date of approval.		

3.a.i. TMDL Implementation

As soon as possible but no later than the dates specified in Table 5-9g, the County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest and Newport Beach and agricultural operators in the Newport Bay watershed shall submit the plans and schedules shown in Table 5-9g and described in Section 3.a.ii. Subsequent phases of TMDL implementation shall take into account the results of the monitoring and assessment efforts required by the initial study phase of the TMDL implementation plan and other relevant studies.

The following sections describe the requirements for the submittal of plans by dischargers in the Newport Bay watershed to complete specific monitoring, investigations and analyses. In each and every case, the plans submitted by the named dischargers will be considered for approval by the Regional Board at a duly noticed public hearing as specified in Chapter 1.5, Division 3, Title 23 of the California Code of Regulations (Section 647 et seq.). The plans are to be implemented upon Regional Board approval and completed as specified in Table 5-9g.

3.a.ii. Monitoring and Assessment

Routine monitoring and special investigations and analyses are an important part of this phased TMDL. Routine monitoring is necessary to assess compliance with the bacterial quality objectives in the Bay and with the WLAs and LAs specified in the TMDL. Special investigations and analyses are needed to identify and characterize sources of fecal coliform input and to determine their fate in the Bay so that appropriate control measures can be developed and implemented. The effectiveness of current and future bacterial control measures needs to be evaluated. The results of these studies may warrant future changes to this TMDL.

3.a.ii.a. Routine Monitoring

By (30 days after State TMDL approval)* the County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest and Newport Beach, and the agricultural operators in the Newport Bay watershed shall propose a plan for routine monitoring to determine compliance with the bacterial quality objectives in the Bay. At a minimum, the proposed plan shall include the collection of five (5) samples/30-

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days at the stations specified in Table 5-9h and shown in Figure 5-1 and analysis of the samples for total and fecal coliform and enterococci. Reports of the collected data shall be submitted monthly. An annual report summarizing the data collected for the year and evaluating compliance with the water quality objectives shall be submitted by September 1 of each year.

In lieu of this coordinated, regional monitoring plan, one or more of the parties identified in the preceding paragraph may submit an individual or group plan to conduct routine monitoring in areas solely within their jurisdiction to determine compliance with the bacterial objectives in the Bay (if appropriate). Any such individual or group plans shall also be submitted by (30 days after State TMDL approval). Reports of the data collected pursuant to approved individual/group plan(s) shall be submitted monthly and an annual report summarizing the data and evaluating compliance with water quality objectives shall be submitted by September 1 of each year.

The monitoring plan(s) shall be implemented upon Regional Board approval.

Table 5-9h

Newport Bay Sampling Stations for Routine Compliance Monitoring with Bacterial Quality Objectives (see Figure 1 for Station Locations)

<u>Ski Zone</u>	<u>33rd Street</u>	<u>Park Avenue</u>
<u>Vaughns Launch</u>	<u>Rhine Channel</u>	<u>Via Genoa</u>
<u>Northstar Beach</u>	<u>De Anza</u>	<u>Alvarado/Bay Is.</u>
<u>Abalone Avenue</u>	<u>Promontory Pt.</u>	<u>10th Street</u>
<u>Dunes East</u>	<u>Bayshore Beach</u>	<u>15th Street</u>
<u>Dunes Middle</u>	<u>Onyx Avenue</u>	<u>19th Street</u>
<u>Dunes West</u>	<u>Garnet Avenue</u>	<u>Lido Island Yacht Club</u>
<u>Dunes North</u>	<u>Ruby Avenue</u>	<u>Harbor Patrol</u>
<u>43rd Street</u>	<u>Sapphire Avenue</u>	<u>N Street Beach</u>
<u>38th Street</u>	<u>Newport Blvd. Bridge</u>	<u>Rocky Point</u>
<u>San Diego Creek @ Campus Dr.</u>	<u>Santa Ana Delhi Channel</u>	<u>Big Canyon Wash</u>
<u>Backbay Dr. Drain</u>		

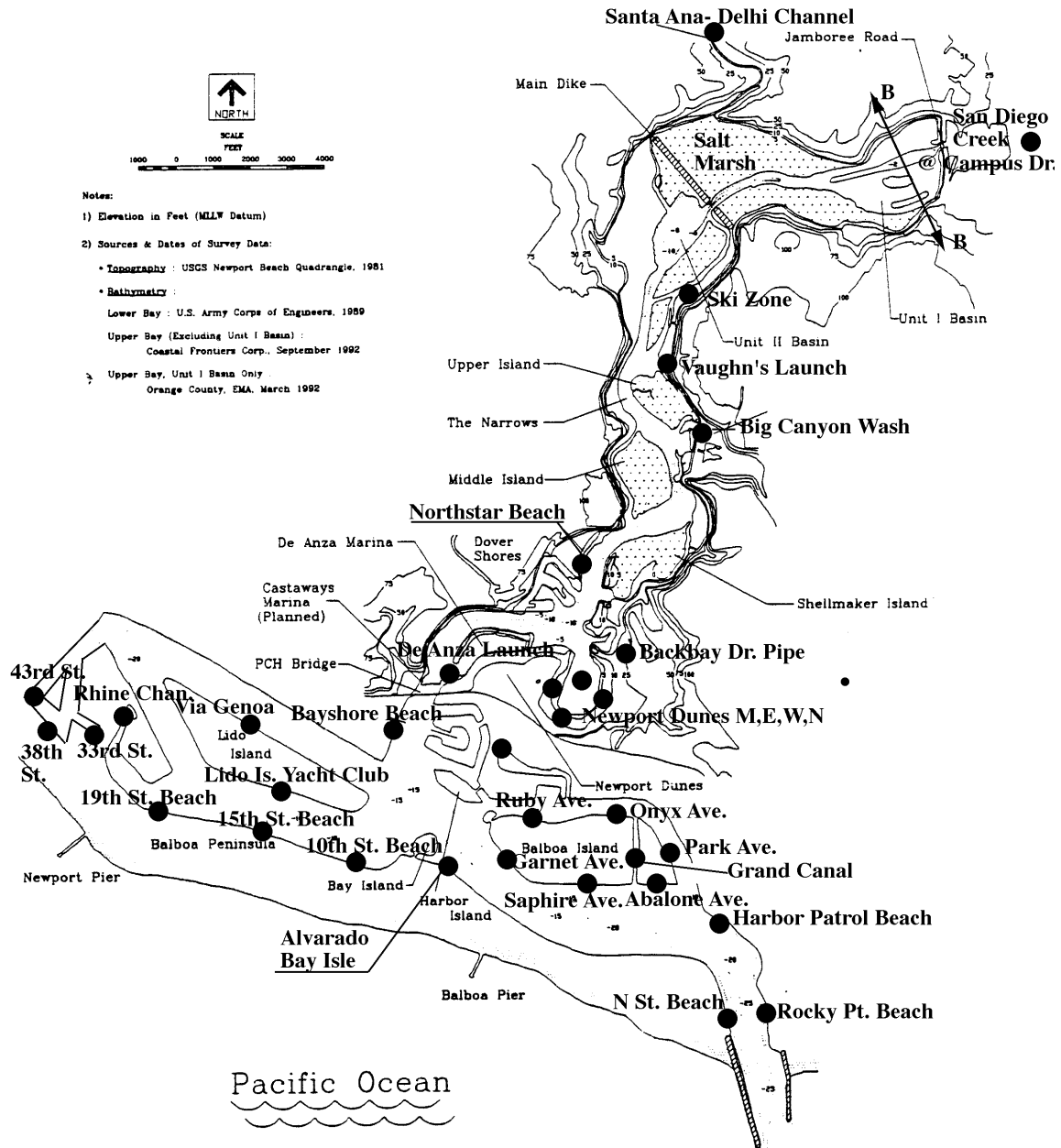


Figure 5-1: Newport Bay Bacterial Quality Monitoring Stations

3.a.ii.b. Fate of Bacterial Inputs

By (30 days after State TMDL approval),* the County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest, and Newport Beach and the agricultural operators in the Newport Bay watershed shall submit a plan for the development and submittal of a water quality model to be completed by 13 months after Regional Board approval of the plan. The model shall be capable of analysis of fecal coliform inputs to Newport Bay, the fate of those inputs, and the effect of those inputs on compliance with bacterial quality objectives in the Bay.

3.a.ii.c. Beneficial Use Assessment

By (30 days after State TMDL approval),* the County of Orange , the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest and Newport Beach shall submit a plan to complete, by 13 months after Regional Board approval of the plan, a beneficial use assessment to identify and quantify water contact recreation activities in Newport Bay. By 13 months after Regional Board approval of the beneficial use assessment plan, these parties shall submit a report of the results of the water contact recreation beneficial use assessment.

By (13 months after State TMDL approval),* the County of Orange , the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest and Newport Beach shall submit a plan to complete, by 13 months after Regional Board approval of the plan, a beneficial use assessment to identify and quantify shellfish harvesting activities in Newport Bay. By 13 months after Regional Board approval of the beneficial use assessment plan, these parties shall submit a report of the results of the shellfish harvesting beneficial use assessment.

The beneficial use assessment reports shall contain recommendations for prioritizing areas within Newport Bay for purposes of evaluation and implementation of cost-effective and reasonable control actions as part of the TMDL process. The Regional Board will consider these recommendations and make its determinations regarding high priority water contact recreation and shellfish harvesting areas at a duly noticed public hearing. These determinations will be considered in establishing interim WLAs and LAs and compliance dates (Task 10, Table 5-9g).

* Note: Upon State approval (i.e., approval by the Regional Board, the State Water Resources Control Board, and the Office of Administrative Law), this parenthetical “formula” will be replaced by the date certain, based on the date of approval.

3.a.ii.d. Source Identification and Characterization

By (60 days after State TMDL approval),* the County of Orange and the City of Newport Beach shall submit a proposed plan for a program, to be completed within 7 months after Regional Board approval of the plan to identify and characterize fecal coliform inputs to The Dunes Resort. In lieu of this coordinated plan, each of these parties may submit an individual plan to identify and characterize fecal coliform inputs to The Dunes Resort. Any such individual plan shall also be submitted by (60 days after State TMDL approval)* and completed within 7 months after Regional Board approval of the plan(s).

By (60 days after State TMDL approval),* the County of Orange and the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest, and Newport Beach shall submit a proposed plan for a program, to be completed within 13 months after Regional Board approval of the plan to identify and characterize fecal coliform inputs to Newport Bay from urban runoff, including stormwater. In lieu of this coordinated, regional plan, one or more of these parties may submit an individual or group plan to identify and characterize fecal coliform inputs to the Bay from urban runoff from areas within its jurisdiction. Any such individual or group plan shall also be submitted by (60 days after State TMDL approval)* and completed within 13 months after Regional Board approval of the plan(s).

By (3 months after State TMDL approval),* the agricultural operators in the Newport Bay watershed shall submit a proposed plan for a program, to be completed within 16 months after Regional Board approval of the plan, to identify and characterize fecal coliform inputs to Newport Bay from agricultural runoff, including stormwater. In lieu of this coordinated plan, one or more of the agricultural operators may submit an individual or group plan to identify and characterize fecal coliform inputs to the Bay from agricultural runoff from areas within their jurisdiction. Any such individual or group plan shall also be submitted by (3 months after State TMDL approval)* and completed within 16 months after Regional Board approval of the plan(s).

By (3 months after State TMDL approval),* the County of Orange and the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest, and Newport Beach shall submit a proposed plan for a program, to be completed within 16 months after Regional Board approval of the plan, to identify and characterize fecal coliform inputs to Newport Bay from natural sources. In lieu of this coordinated, regional plan, one or more of these parties may submit an individual or group plan to identify and characterize fecal coliform inputs to the Bay from natural sources from areas within its jurisdiction. Any such individual or group plan shall also be submitted by (3

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months after State TMDL approval)* and completed within 16 months after Regional Board approval of the plan(s).

3.a.ii.e. Evaluation of Vessel Waste Control Program

By (90 days after State TMDL approval), * the County of Orange and the City of Newport Beach shall submit a plan to complete, by one year after Regional Board approval of the plan, an assessment of the effectiveness of the vessel waste control program implemented by those agencies in Newport Bay. The plan shall be implemented upon approval by the Regional Board. A report of the study results shall be submitted, together with recommendations for changes to the vessel waste program necessary to ensure compliance with this TMDL.

The Regional Board will consider appropriate changes to the vessel waste control program. These changes shall be implemented in accordance with a schedule to be established by the Regional Board.

3.a.ii.f. TMDL, WLA and LA Evaluation and Source Monitoring Program

By (3 months after completion of Tasks 2, 4a, and 6 as shown in Table 5-9g)* the County of Orange, the Cities of Tustin, Irvine, Costa Mesa Santa Ana, Orange, Lake Forest and Newport Beach, and the agricultural operators in the Newport Bay watershed shall propose a plan for evaluation and source monitoring to determine compliance with the WLAs and LAs specified in Table 5-9f. In lieu of this coordinated, regional plan, one or more of these parties may submit an individual or group plan to conduct TMDL, WLA, LA and Source Evaluation monitoring from areas solely within their jurisdiction. Any such individual or group plan shall also be submitted by (3 months after completion of Tasks 2, 4a, and 6 as shown in Table 5-9g).* Reports of the data collected pursuant to approved individual/group plan(s) shall be submitted monthly and an annual report summarizing the data and evaluating compliance with WLAs and LAs shall be submitted by September 1 of each year. The annual report shall also include an evaluation of the effectiveness of control measures implemented to control sources of fecal coliform, and recommendations for any changes to the control measures needed to ensure compliance with the TMDL, WLAs, and LAs.

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The evaluation and source monitoring plan(s) shall be implemented upon Regional Board approval.

3.a.ii.g. Updated TMDL Report

The County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Orange, Lake Forest and Newport Beach, and the agricultural operators in the Newport Bay watershed shall submit Updated TMDL Reports as specified in Table 5-9g. These updated TMDL reports shall, at a minimum, integrate and evaluate the results of the studies required in Table 5-9g (Task 1 – 7). The reports shall include recommendations for revisions to the TMDL, if appropriate and for interim WLAs, LAs and compliance schedules

3.a.ii.h. Adjust TMDL; Adopt Interim WLA, LAs and Compliance Dates

Based on the results of the studies required by Table 5-9g and recommendations made in the Updated TMDL Reports, changes to the TMDL for fecal coliform may be warranted. Such changes would be considered through the Basin Plan Amendment process. Upon completion and consideration of the studies and any appropriate Basin Plan amendments, interim WLAs and LAs that lead to ultimate compliance with the TMDL specified in Table 5-9f, or with an approved amended TMDL, will be established with interim compliance dates. Schedules will also be established for submittal of implementation plans for control measures to achieve compliance with these WLAs, LAs, and compliance dates. These implementation plans will be considered by the Regional Board at a duly noticed public hearing.

The Regional Board is committed to the review of this TMDL every three years or more frequently if warranted by these or other studies. The County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Lake Forest, and Newport Beach, The Irvine Company and the Irvine Ranch Water District have undertaken to prepare a health risk assessment for Newport Bay for water contact recreation and shellfish harvesting beneficial uses. This study will evaluate whether exceedances of fecal coliform objectives correlates with actual impairment of beneficial uses and may recommend revisions to the Basin Plan objectives and/or beneficial use designations. Because this study is in progress, it is not required by this TMDL implementation plan, but will be considered in conjunction with the studies required by the implementation plan.